

IN THE SPECIFICATION:

Page 1, after the title and before the first line of the specification, insert the following paragraph:

--The present application is based on International Application PCT/JP2005/000086, filed January 6, 2005, which claims priority to Japanese Patent Application No. 2004-015926, filed January 23, 2004, the entire contents of which are hereby incorporated by reference.--

Page 5, amend as follows:

--removing a signal in a specific band, the filter circuit being connected to the variable gain amplifier; an A/D converter for converting an analog signal into a digital signal, the converter being connected to the filter circuit; ~~an adaptive transversal filter for amplifying a signal in a specific band as well as performing waveform equalization for a reproduction signal, the filter being connected to the A/D converter;~~ an automatic gain controller being connected to the A/D converter; a waveform equalizer for performing waveform equalization, the equalizer being connected to the A/D converter; a control circuit for performing baseline control for the output of the waveform equalizer and the output of the A/D converter, on the basis of the output of the waveform equalizer, ~~the control circuit being connected to the waveform equalizer;~~ an adaptive transversal filter for amplifying a signal in a specific band as well as performing waveform equalization for a reproduction signal, the filter being connected to the A/D/ converter; a detection circuit for performing error detection and correction using a LMS (Least Mean Square) algorithm, the detection circuit being connected to the adaptive transversal filter; a decoder for performing maximum likelihood decoding, the decoder being connected to the adaptive transversal filter; and a timing recovery logic circuit for extracting a reproduction clock, the logic circuit being connected to the control circuit.

According to Claim 3 of the present invention, a signal processing apparatus comprises a variable gain amplifier for automatically adjusting a signal read from a recording medium so that

the signal has a desired amplitude; an A/D converter for converting an analog signal into a digital signal, the converter being connected to the variable gain amplifier; ~~an adaptive~~

Page 6, lines 1-15, amend as follows:

~~transversal filter for amplifying a signal in a specific band as well as performing waveform equalization for a reproduction signal, the filter being connected to the A/D converter; an automatic gain controller being connected to the A/D converter; a waveform equalizer for performing waveform equalization, the equalizer being connected to the A/D converter; a control circuit for performing baseline control for the output of the waveform equalizer and the output of the A/D converter on the basis of the output of the waveform equalizer; an adaptive transversal filter for amplifying a signal in a specific band as well as performing waveform equalization for a reproduction signal, the filter being connected to the output of the A/D converter that is baseline-controlled; an automatic gain controller being connected to the A/D converter; a waveform equalizer for performing waveform equalization, the equalizer being connected to the A/D converter; a control circuit for performing baseline control, the control circuit being connected to the waveform equalizer;~~ a detection circuit for performing error detection and correction using a LMS (Least Mean Square) algorithm, the detection circuit being connected to the adaptive transversal filter; a decoder for performing maximum likelihood decoding, the decoder being connected to the adaptive transversal filter; and a timing recovery logic circuit for extracting a reproduction clock, the logic circuit being connected to the control circuit.

Page 8, lines 2-7, amend the paragraph as follows:

According to Claim 13 of the present invention, in a signal processing method for processing a signal using a PRML (Partial Response Maximum Likelihood) method, data optimization for the signal in a time axis direction and data optimization for the signal in an amplitude direction are carried out using different waveform equalizers, respectively, and baseline control is carried out during equalization by the waveform equalizers.